

# Obese young adults unaware of kidney disease risk, study finds

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Many young adults with abdominal obesity exhibit a readily detectable risk factor for chronic kidney disease (CKD), yet the vast majority don't know they're at risk, according to a study of nationwide health data led by Albert Einstein College of Medicine researchers that was published online today in the journal *PLOS ONE*.

Einstein researchers analyzed health data on nearly 7,000 non-pregnant young adults. They found that 11 percent of obese Mexican Americans have albuminuria (elevated levels of the protein albumin in the urine), which signals that the kidneys aren't functioning normally and that a person faces a heightened risk for developing CKD. This is four times the prevalence in Hispanics of normal weight. About six percent of whites and blacks with abdominal obesity had elevated levels of the protein.

An estimated one in three Americans is at risk for developing CKD over the course of their lifetime, usually later in adulthood. "Even though [chronic kidney disease](#) typically manifests in older people, the disease can start much earlier but often is not recognized early on," said study leader Michal L. Melamed, M.D., associate professor of medicine and of epidemiology & public health at Einstein and attending physician, nephrology at Montefiore Health System. "Because treatment options for CKD are limited, prevention is the best approach for those at risk. A healthier lifestyle in young adults will go a long way toward promoting kidney health later in life."

Previous studies had suggested that abdominal obesity may damage kidney function even before—and perhaps independent of—kidney damage associated with hypertension and diabetes, which are both associated with obesity.

"In this study we wanted to evaluate whether obesity is associated with CKD even in an otherwise healthy young adult population and to identify risk factors that may promote this association," said first author Harini Sarathy, M.D., formerly a resident physician at Jacobi Medical Center, an Einstein clinical affiliate. "We also wanted to see whether race or ethnicity plays a role in linking [abdominal obesity](#) with CKD, as studies have suggested."

The Einstein researchers found that excess albumin was present even in the urine of obese individuals with normal blood pressure, glucose levels, and insulin sensitivity, confirming a direct connection between obesity and the albuminuria associated with [kidney disease](#). These findings also suggest that obesity should be considered an independent risk factor for CKD and that doctors should be testing for kidney damage when evaluating obese young adults.

The Einstein researchers analyzed [health data](#) on 6,918 non-pregnant adults ages 20 to 40. The data were gathered between 1999 and 2010 by the National Health and Nutrition Examination Survey (NHANES), a program of studies designed to assess the health and nutritional status of adults and children in the United States. The participants self-identified as non-Hispanic white, non-Hispanic black, or Mexican-American. Abdominal obesity (defined as a waist circumference  $\geq 102$  cm (40 inches) in males and  $\geq 88$  cm (35 inches) in females) was present in 45 percent of blacks, 40 percent of Mexican-Americans, and 37 percent of whites.

The study also found that among all [young adults](#) with albuminuria,

fewer than 5 percent had ever been told they have kidney disease. "Clearly, clinicians and public [health](#) officials need to do more to identify and treat young people at risk for early progressive kidney disease so they can adopt the behavioral changes to prevent CKD from occurring," said Dr. Melamed.

**More information:** "Abdominal Obesity, Race and Chronic Kidney Disease in Young Adults: Results from NHANES 1999-2010" *PLOS ONE*, 2016.

Provided by Albert Einstein College of Medicine

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